

Work Order ID 141997

Tuesday, February 23, 2016 11:24:21 AM

141997

Page 1

Item ID: D3260-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Spring
 Start Date: 2/23/2016 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 3/11/2016 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: MJS Date: FEB 23 2016 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3260	Rev A								

100 PURCHASING 0.00 ***100*** 30 FEB 24 2016 **DAS 13 9-89**
 Purchasing Memo 0.00
 Purchasing Issue P/O: 31481 Make as per Dwg D3260 Possible Supplier:
 Victory Spring Material release note is required

110 Receive & Inspect for Damage & Mat'l Certs 0.00 ***110*** 30 **DAS 6 9-89**
 Packaging Memo 0.01 **MAR 08 2016**
 Packaging Ensure Material Release Note is attached

120 QC6- Inspect dimensions to drawing 0.00 ***120*** 30 **DAS 38 9-89**
 QC Memo 0.00 **MAR 10 2016**
 Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>5028</u>	0.00							
130									
Packaging	Memo	0.01				<u>30</u>	<u>6</u>		
Packaging							<u>9-89</u>		MAR 11 2016
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.05							
Quality Control									

10/1/14 AG
 MJS MAR 14 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

Tuesday, February 23, 2016 11:24:25 AM

Page 1

Work Order ID: 141997

141997

Parent Item: D3260-1

D3260-1

Parent Item Name: Spring

Start Date: 2/23/2016

Required Date: 3/11/2016

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP A04.03.29New issueKJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3260-1P		Purchased	No			100	Each	0.0000	1	30			
D3260-1P										**			
Spring													

DAS
6
9-89

MAR 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

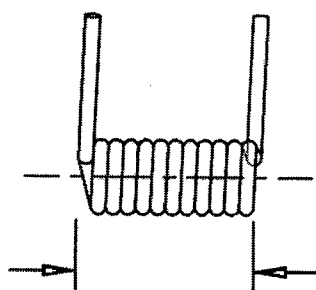
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								



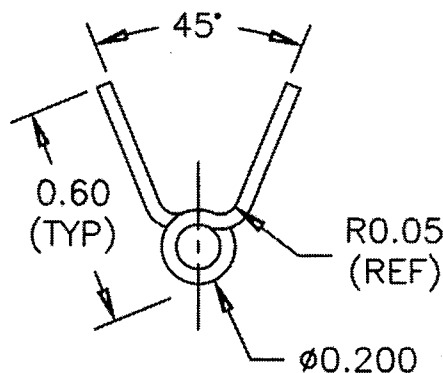
DESIGN RT	DRAWN BY RT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D3260	REV. A SHEET 1 OF 1
DATE 04.02.27		TITLE SPRING	SCALE 2:1
A	04.02.27	NEW ISSUE	

RELEASED
04.04.07

SPECIFICATION CONTROL DRAWING



Ø0.040
12 COIL
(REF 0.480)



D3260-1 SPRING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 141993MUS
1602-23

D3260-1 NOTES:

- 1) MATERIAL: AISI 302 SS SPRING WIRE Ø0.040 PER ASTM A313
(MIN TENSILE STRENGTH = 250 ksi)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31481**

Purchase Order Date 2/24/2016 1:57:50 PM

PO Print Date 2/24/2016

Page Number 1 of 2

Order From :

VC-VIC002

VICTORY SPRING LTD.
#2 6104 - 82 AVE.
EDMONTON, AB T6B 0E7
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
FEB 24 2016

Contact Name

Vendor Phone 866 230 5312

Ship To Contact

Ship To Phone

Ship Via: FedEx Overnight collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D3260-1P AS PER DWG D3260 REV.A B141997	Spring	3/8/2016 Yes 3/8/2016		30.00 / Each	\$9.25	\$277.50
Line Total:							\$277.50
2	71401-45 Procurement Quality Clauses A005 RIGHT OF ENTRY A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE) A016 PERSONNEL QUALIFICATION A026 CERTIFICATION OF MATERIAL CONFORMANCE A040 NOTIFICATION OF QUALITY ESCAPE A042 DART NOTIFICATION BY SUPPLIER A043 RETENTION OF QUALITY DOCUMENTS	PROCUREMENT QUALITY CLAUSES	2/8/2016 No 2/8/2016		1.00 / 16/3/10 30	\$0.00	\$0.00

Note:

2/24/2016



convenient. consistent. correct.

PACKING SLIP

34660

#2, 6104 - 82 Ave
Edmonton, AB T6B 0E7
t + 780 442.4020
f + 780 466 8000

BILL TO: Dart Aerospace Ltd
1270 Aberdeen Street
Hawkesbury, ON K6A, 1K7

SHIP TO:

DATE		ORDER No.		SHIP VIA	
9-Mar-16		PO31481		FedEx Overnight Collect	
QUANTITY	DESCRIPTION			UNIT	AMOUNT
30	D3260-1P Torsion Spring 16 1/3 1/10 SP				
GST #	TERMS	SUBTOTAL	FREIGHT	GST	TOTAL
854454527	NET 30 DAYS				

MATERIAL CERTIFICATION

REPORT FOR: Dart Aerospace Ltd.	DATE: 3/9/2016																						
PART/DRAWING #: D3260-1P	PO # PO31481																						
SPRING DESCRIPTION: Torsion Spring	QUANTITY: 30																						
MATERIAL GRADE: T302 Stainless Steel Wire Spring ASTM-313-03																							
PROPERTIES: <table> <thead> <tr> <th><u>Chemical</u></th> <th><u>Physical</u></th> </tr> </thead> <tbody> <tr> <td>Carbon: (C) 0.067</td> <td>Size: 0.040"</td> </tr> <tr> <td>Chromium: (Cr) 18.010</td> <td></td> </tr> <tr> <td>Copper: (Cu) 0.450</td> <td>Tensile: 297,000 / 298,000</td> </tr> <tr> <td>Manganese: (Mn) 1.080</td> <td></td> </tr> <tr> <td>Molybdenum: (Mo) 0.300</td> <td></td> </tr> <tr> <td>Nickel: (Ni) 8.020</td> <td></td> </tr> <tr> <td>Nitrogen: (N) 0.070</td> <td>Heat # 410059</td> </tr> <tr> <td>Phosphorus: (P) 0.029</td> <td></td> </tr> <tr> <td>Silicon: (Si) 0.320</td> <td></td> </tr> <tr> <td>Sulphur: (S) 0.001</td> <td></td> </tr> </tbody> </table> Mill Source: SUMIDEN Origin Country: USA		<u>Chemical</u>	<u>Physical</u>	Carbon: (C) 0.067	Size: 0.040"	Chromium: (Cr) 18.010		Copper: (Cu) 0.450	Tensile: 297,000 / 298,000	Manganese: (Mn) 1.080		Molybdenum: (Mo) 0.300		Nickel: (Ni) 8.020		Nitrogen: (N) 0.070	Heat # 410059	Phosphorus: (P) 0.029		Silicon: (Si) 0.320		Sulphur: (S) 0.001	
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Certified by: Jeremy Burrowes

Victory Spring Ltd. certifies this to be a true & accurate copy of the original contained in the company records.

CERTIFICATE OF CONFORMANCE

REPORT FOR : Dart Aerospace Ltd	DATE: 3/9/2016
PART/DRAWING #: D3260-1P	PO # 31481
DESCR: Torsion Spring	QUANTITY: 30

VICTORY SPRING CERTIFIES BY THIS DOCUMENT THAT ALL OPERATIONS ARE DONE ACCORDING TO
DRAWINGS AND SPECIFICATIONS

CHARACTERISTIC	SPECIFIED	MEASURED	NOTES
Material type	SS 302	SS 302	
Material diameter	0.040"	0.040"	
Coil I.D.		0.116"	
Coil O.D.	0.200"	0.195"	
Number of Coils	12.0 ref	12.2	
Overall Length	0.480"	0.518"	
End Type	as per dwg	yes	
Helix	Left Hand	Left Hand	

Mill Certificate attached: Yes
Material Heat Number: 410059

Inspected by: Michael Burrowes - QA

